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cont
- a) checking for a presence of the positive over-voltage condition;
 - b) checking, responsive to the positive over-voltage condition not being present, for a presence of the negative over-voltage condition;
 - c) starting, responsive to the negative over-voltage condition being present, a first timer of predetermined duration;
 - d) disconnecting, responsive to the timer having expired and to the negative over-voltage condition being present, the line circuit from the power supply and from the telephone subscriber line;
 - e) waiting a predetermined amount of time; and
 - f) reconnecting the line circuit to the power supply and to the telephone subscriber line.--

REMARKS

Reconsideration of this application is respectfully requested. By this amendment, claims 1, 11, and 16 have been amended. Currently, claims 1-23 are pending in this application.

Rejection under 35 U.S.C. 102(b)

Claims 1 and 7-23 were rejected under 35 U.S.C. 102(b) as anticipated by Hung (U.S. Patent No. 4,709,296). Specifically, the Examiner has taken the position that the isolation relay 18 in Hung "connects (couples) or disconnects (decouples) the feed resistors (that connect Tip T and Ring R from Central Office and provide power supply) to the line [interface] circuit." This rejection is respectfully traversed in view of the amendments to the claims and the following arguments.

Independent Claim 1:

Applicants have amended claim 1 to recite a “line circuit isolation means for selectively coupling the line circuit to the telephone subscriber line,” in addition to the previously claimed isolation means for selectively coupling a power supply to the line circuit.

Hung teaches an isolation relay that selectively couples the line circuit to the telephone subscriber line (isolation relay 18). Hung also appears to teach that a power supply of +7 V and -22 V should be connected to the line circuit (see Fig. 3 and Col. 6, lines 10-12 and 30-32). Hung does not, however, teach or suggest an isolation means for selectively coupling or decoupling this power supply from/to the line circuit.

To anticipate a claim, a reference must teach every claimed element. In this instance, both Hung and the instant claim have a telephone subscriber line, a line circuit, a line circuit isolation means for selectively coupling the telephone subscriber line to the line circuit, and a power supply.

The instant claim also recites an isolation means for selectively coupling or decoupling the power supply from the line circuit. The fact that the telephone subscriber line supplies power to the line circuit in Hung is irrelevant. Hung does not teach or suggest any means that disconnects his power supply from the line circuit. Accordingly, Hung does not anticipate claim 1, and applicants respectfully request that the rejection of claim 1 be withdrawn.

Independent claim 7:

The preamble of independent claim 7 recites a method of protecting a line circuit connected to a power supply and to a telephone subscriber line. From the preamble it is clear that the line circuit is connected to two separate elements: (1) a power supply; and (2) a telephone subscriber line. The method includes the step of “disconnecting... the line circuit

from the power supply.” This step cannot be anticipated by a reference that teaches disconnecting the line circuit from the telephone subscriber line, even if the telephone subscriber line provides power, since the telephone subscriber line is recited in the claim as a different element than the power supply. Accordingly, applicants respectfully submit that Hung does not anticipate claim 7.

Applicants understand that the Examiner’s position is that the telephone subscriber line provides power and thus is a power supply. However, in independent claim 7, both a telephone subscriber line and a separate power supply are expressly recited. Pursuant to MPEP 2131, Hung does not anticipate this claim since “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Since Hung discloses one of the elements, but not both, Hung does not anticipate independent claim 7.

Independent claims 11 and 16:

Independent claims 11 and 16 have been amended to recite that the line circuit is connected to a telephone subscriber line and to a separate power supply, and further have been amended to recite steps of: “disconnecting...the line circuit from the power supply and from the telephone subscriber line;” and “reconnecting the line circuit to the power supply and to the telephone subscriber line.” Since Hung fails to teach or suggest a method that disconnects and reconnects both the telephone subscriber line and a separate power supply from/to a line circuit, applicants respectfully request that the rejection of these claims under 35 U.S.C. 102 be withdrawn.

Rejection under 35 U.S.C. 103

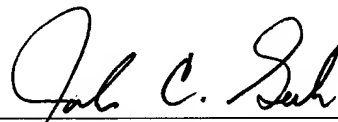
Claims 2-6 were rejected under 35 U.S.C. 103 as unpatentable over Hung in view of Chen et al. (U.S. Patent No. 6,288,883). Since claims 2-6 depend from claim 1, and Chen fails to make up the deficiencies noted above with respect to Hung, applicants respectfully request that the rejection of claims 2-6 under 35 U.S.C. 103 be withdrawn.

Conclusion

In view of foregoing claim amendments and remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested. If there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

If any fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 502246 (Ref: NN-RO3951).

Respectfully Submitted



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Submitted herewith is a marked-up version of the amended claims to show changes made in the foregoing Amendment.

IN THE CLAIMS

Claims 1, 11, and 16 have been amended as follows:

--1. (Amended) A protection arrangement for a line circuit, comprising:

current sensing means for sensing current flowing through the telephone subscriber line;

line circuit isolation means for selectively coupling the line circuit to the telephone subscriber line;

isolation means for selectively coupling a power supply to the line circuit; and

control means for operating the isolation means to decouple the power supply from the line circuit in response to a current sensed by the current sensing means exceeding a current threshold, and to recouple the power supply to the line circuit responsive to a predetermined time interval having passed.--

--11. (Amended) A method of protecting a line circuit connected to a telephone subscriber line and to a separate power supply from an over-voltage condition, the over-voltage condition being defined as when voltage on the telephone subscriber line exceeds a predetermined voltage threshold value, comprising the steps of:

- a) checking for a presence of the over-voltage condition;
- b) starting, responsive to the over-voltage condition being present, a first timer of predetermined duration;

c) disconnecting, responsive to the timer having expired and to the over-voltage condition being present, the line circuit from the power supply and from the telephone subscriber line;

d) waiting a predetermined amount of time; and

e) reconnecting the line circuit to the power supply and to the telephone subscriber line.--

--16. (Amended) A method of protecting a line circuit connected to a telephone subscriber line and to a separate power supply from positive and negative over-voltage conditions, the positive over-voltage condition being defined as when voltage on the telephone subscriber line exceeds a predetermined positive voltage threshold value and the negative over-voltage condition being defined as when voltage on the telephone subscriber line exceeds a predetermined negative voltage threshold value, comprising the steps of:

a) checking for a presence of the positive over-voltage condition;

b) checking, responsive to the positive over-voltage condition not being present, for a presence of the negative over-voltage condition;

c) starting, responsive to the negative over-voltage condition being present, a first timer of predetermined duration;

d) disconnecting, responsive to the timer having expired and to the negative over-voltage condition being present, the line circuit from the power supply and from the telephone subscriber line;

e) waiting a predetermined amount of time; and

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f) reconnecting the line circuit to the power supply and to the telephone subscriber
line.--